

**Title: SYSTEM TO VARY CAPACITANCE BASED  
ON A CONTROL SIGNAL**

**ABSTRACT**

Some embodiments provide a plurality of capacitors coupled in parallel, a  
5 plurality of capacitor switches, each one of the capacitor switches coupled in series with a  
respective one of the plurality of capacitors, one or more biasing circuits to independently  
set each of the plurality of capacitor switches to one of a reset voltage, a first threshold  
voltage, and a second threshold voltage, and a plurality of control switches, each of the  
control switches to couple and to decouple a respective one of the plurality of capacitor  
10 switches to and from a control voltage.